

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 1 of 7

## Manganese Chloride, Reagent

### SECTION 1 : Identification of the substance/mixture and of the supplier

**Product name :** Manganese Chloride, Reagent

**Manufacturer/Supplier Trade name:**

**Manufacturer/Supplier Article number: S25418**

**Recommended uses of the product and uses restrictions on use:**

**Manufacturer Details:**

AquaPhoenix Scientific  
9 Barnhart Drive, Hanover, PA 17331

**Supplier Details:**

Fisher Science Education  
15 Jet View Drive, Rochester, NY 14624

**Emergency telephone number:**

Fisher Science Education Emergency Telephone No.: 800-535-5053

### SECTION 2 : Hazards identification

**Classification of the substance or mixture:**



**Irritant**

Acute toxicity (oral, dermal, inhalation), category 4



**Health hazard**

Specific target organ toxicity following repeated exposure, category 2

Chronic hazards to the aquatic environment, category 3

AcTox Oral. 4

Aquatic AcTox. 3

STOT RE 2

**Signal word** :Warning

**Hazard statements:**

Harmful if swallowed

May cause damage to organs through prolonged or repeated exposure

Harmful to aquatic life with long lasting effects

**Precautionary statements:**

Wash ... thoroughly after handling

Do not eat, drink or smoke when using this product

Avoid release to the environment

Do not breathe dust/fume/gas/mist/vapours/spray

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Get Medical advice/attention if you feel unwell

Collect spillage

Dispose of contents/container to ...

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 2 of 7

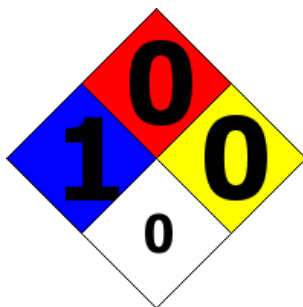
## Manganese Chloride, Reagent

### Combustible Dust Hazard :

May form combustible dust concentrations in air (during processing).

### Other Non-GHS Classification:

#### WHMIS NFPA/HMIS



NFPA SCALE (0-4)

|                     |   |
|---------------------|---|
| Health              | 1 |
| Flammability        | 0 |
| Physical Hazard     | 0 |
| Personal Protection | X |

HMIS RATINGS (0-4)

### SECTION 3 : Composition/information on ingredients

#### Ingredients:

|                           |                                   |       |
|---------------------------|-----------------------------------|-------|
| CAS 13446-34-9            | Manganese dichloride tetrahydrate | 100 % |
| Percentages are by weight |                                   |       |

### SECTION 4 : First aid measures

#### Description of first aid measures

**After inhalation:** Loosen clothing as necessary and position individual in a comfortable position. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Consult a physician.

**After skin contact:** Wash hands and exposed skin with soap and plenty of water. Consult a physician.

**After eye contact:** Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Seek medical attention if irritation persists or if concerned.

**After swallowing:** Rinse mouth thoroughly. Never give anything by mouth to an unconscious person. Consult a physician.

#### Most important symptoms and effects, both acute and delayed:

Shortness of breath. Irritation. Nausea. Headache.;

#### Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician.

### SECTION 5 : Firefighting measures

#### Extinguishing media

**Suitable extinguishing agents:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**For safety reasons unsuitable extinguishing agents:**

#### Special hazards arising from the substance or mixture:

Hydrogen chloride gas. Manganese. Manganese oxides.

#### Advice for firefighters:

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 3 of 7

## Manganese Chloride, Reagent

**Protective equipment:** Wear protective eyewear, gloves, and clothing.Refer to Section 8.

**Additional information (precautions):** Avoid generating dust. Avoid breathing vapors, mist, or gas.

### SECTION 6 : Accidental release measures

#### Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.

#### Environmental precautions:

Prevent from reaching drains, sewer, or waterway. If safe to do so prevent further leakage or spillage.Discharge into the environment must be avoided.

#### Methods and material for containment and cleaning up:

Follow Chemical Hygiene Plan. Pick up and arrange disposal without creating dust.Sweep up and containerize for disposal. Refer to Section 8.If necessary use trained response staff or contractor.

#### Reference to other sections:

### SECTION 7 : Handling and storage

#### Precautions for safe handling:

Minimize dust generation and accumulation. Wash hands after handling. Provide appropriate exhaust ventilation at places where dust is formed. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Use only in well ventilated areas.Avoid contact with eyes, skin, and clothing.

#### Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, dry, and well-ventilated area. Refer to Sections 5, 8, and 10.Store with like hazards.Follow Chemical Hygiene Plan. Store away from incompatible materials. Store away from food.

### SECTION 8 : Exposure controls/personal protection



#### Control Parameters:

13446-34-9, Manganese dichloride tetrahydrate, ACGIH TLV: 0.2 mg/m<sup>3</sup>, OSHA PEL: 5 mg/m<sup>3</sup>, , OSHA PEL TWA (Total Dust) 15 mg/m<sup>3</sup> (50 mppcf\*), , ACGIH TLV TWA (inhalable particles) 10 mg/m<sup>3</sup>

#### Appropriate Engineering controls:

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment.Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

#### Respiratory protection:

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges.Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 4 of 7

## Manganese Chloride, Reagent

|                                   |   |
|-----------------------------------|---|
| <b>Protection of skin:</b>        | Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. |
| <b>Eye protection:</b>            | Safety glasses with side shields or goggles. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).   |
| <b>General hygienic measures:</b> | Avoid contact with skin, eyes, and clothing. Wash hands and exposed skin with soap and plenty of water. Wash hands before breaks and immediately after handling the product. Do not inhale gases, fumes, dust, mist, vapor, and aerosols. Do not eat, drink, smoke, or use personal products when handling chemical substances. Before wearing wash contaminated clothing.  |

### SECTION 9 : Physical and chemical properties

|   |                              |  |  |
|---|------------------------------|--|--|
| <b>Appearance (physical state,color):</b> | Light red crystalline powder | <b>Explosion limit lower:<br/>Explosion limit upper:</b> | Non Explosive<br>Non Explosive                           |
| <b>Odor:</b>                              | Odorless                     | <b>Vapor pressure:</b>                                   | Not Available  |
| <b>Odor threshold:</b>                    | Not Applicable               | <b>Vapor density:</b>                                    | Not Available  |
| <b>pH-value:</b>                          | 4.0 - 6 at 99 g/l at 25°C    | <b>Relative density:</b>                                 | 1.913 g/cm <sup>3</sup>                                  |
| <b>Melting/Freezing point:</b>            | 58°C                         | <b>Solubilities:</b>                                     | Water solubility 99 g/l at 20°C                          |
| <b>Boiling point/Boiling range:</b>       | 1190°C                       | <b>Partition coefficient (n-octanol/water):</b>          | No Information   |
| <b>Flash point (closed cup):</b>          | Not Applicable               | <b>Auto/Self-ignition temperature:</b>                   | Not Applicable   |
| <b>Evaporation rate:</b>                  | No Information               | <b>Decomposition temperature:</b>                        | Not Available  |
| <b>Flammability (solid,gaseous):</b>      | No Information               | <b>Viscosity:</b>  | a. Kinematic: Not Available<br>b. Dynamic: Not Available |
| <b>Density:</b> Not Available             |                              |  |  |

### SECTION 10 : Stability and reactivity

**Reactivity:** Nonreactive under normal conditions.

**Chemical stability:** Stable under normal conditions.

**Possible hazardous reactions:** None under normal processing

**Conditions to avoid:** Incompatible Materials. Dust generation. Excess heat. exposure to moist air or water.

**Incompatible materials:** Sodium. Sodium oxides. Strong acids. Potassium. Zinc. Strong reducing agents. Hydrogen peroxides.

**Hazardous decomposition products:** Hydrogen chloride. oxides of manganese. irritating and toxic fumes and gases.

### SECTION 11 : Toxicological information

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 5 of 7

## Manganese Chloride, Reagent

|   |  |          |
|---|--|----------|
| <b>Acute Toxicity:</b>                                  |  |          |
| <b>Oral:</b>  | 1,484 mg/kg  | LD50 Rat |
| <b>Chronic Toxicity:</b> No additional information.     |  |          |
| <b>Corrosion Irritation:</b> No additional information. |  |          |
| <b>Sensitization:</b>                                   | No additional information.                           |          |
| <b>Single Target Organ (STOT):</b>                      | No additional information.                           |          |
| <b>Numerical Measures:</b>                              | No additional information.                           |          |
| <b>Carcinogenicity:</b>                                 | No additional information.                           |          |
| <b>Mutagenicity:</b>                                    | Laboratory experiments have shown mutagenic effects. |          |
| <b>Reproductive Toxicity:</b>                           | No additional information.                           |          |

## SECTION 12 : Ecological information

### Ecotoxicity

**Fish:** LC50 - Carassius auratus (goldfish) - 18.8 mg/l - 7 d

**Invertebrates:** EC50 - Daphnia magna (Water flea) - > 11 mg/l - 48 h

### Persistence and degradability:

### Bioaccumulative potential:

### Mobility in soil:

### Other adverse effects:

## SECTION 13 : Disposal considerations

### Waste disposal recommendations:

Offer surplus and non-recyclable solutions to a licensed disposal company. Dispose of empty containers as unused product. Consult federal, state, provincial, and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product. If necessary use trained response staff or contractor. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11).

## SECTION 14 : Transport information

### UN-Number

Not Dangerous Goods

### UN proper shipping name

Not Dangerous Goods

### Transport hazard class(es)

**Packing group:** Not Dangerous Goods

### Environmental hazard:

### Transport in bulk:

### Special precautions for user:

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.29.2014

Page 6 of 7

## Manganese Chloride, Reagent

### SECTION 15 : Regulatory information

#### United States (USA)

##### SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic

##### SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

##### RCRA (hazardous waste code):

None of the ingredients is listed

##### TSCA (Toxic Substances Control Act):

All ingredients are listed.

##### CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients is listed

#### Proposition 65 (California):

##### Chemicals known to cause cancer:

None of the ingredients is listed

##### Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

##### Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

##### Chemicals known to cause developmental toxicity:

None of the ingredients is listed

#### Canada

##### Canadian Domestic Substances List (DSL):

All ingredients are listed.

##### Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

##### Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

### SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

#### GHS Full Text Phrases:

#### Abbreviations and acronyms:

## Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

**Effective date** : 12.29.2014

Page 7 of 7

### Manganese Chloride, Reagent

IMDG: International Maritime Code for Dangerous Goods  
PNEC: Predicted No-Effect Concentration (REACH)  
CFR: Code of Federal Regulations (USA)  
SARA: Superfund Amendments and Reauthorization Act (USA)  
RCRA: Resource Conservation and Recovery Act (USA)  
TSCA: Toxic Substances Control Act (USA)  
NPRI: National Pollutant Release Inventory (Canada)  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
ACGIH: American Conference of Governmental Industrial Hygienists  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
DNEL: Derived No-Effect Level (REACH)

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